History of the M14 SSR to MK 14 MOD 2 Conversion - 5/30/2012

It is understand that the need for an improvement over the M14 SSR began to materialize during the first half of 2010 due to lack of a night vision capability and some other issues such as bedding breakdown and possibly reliability (to include extractor loss on occasion). I believe (b)(6) and (b)(6) traveled to NECC or MESG-2 to discuss the issues and possible solutions. I was made aware of the issue in May of 2010 (I saw a draft letter for replacement of the M14 SSR dated 10 May).

I first got directly involved when I helped host a demonstration focused on looking at the MK 14 MOD 0 or 1 as an alternative. This demo was held at the SWAF on 11 August 2010 (and also the 2521 UGR for NVD demonstrations). (b)(6) were in attendance. I also put together a powerpoint of alternatives for a meeting with (b)(6) around 24 August (included were MK 11, MK 13, MK 14 MOD 1 and rails for M14 SSR). A recent development at that time was a Sage stock capable of supporting a full heavy barreled action. The user reps were also very interested in going the route of product improving the M14 SSR in this manner (they did not want to trade off the 4 inches of barrel length and accuracy potential by going to MK 14 MOD 1).

The decision was made to pursue the Sage Heavy Barrel Capable stock as well as the 3.5-15X NXS Optic for the M14 SSR Upgrade and 3 prototype stocks were procured. Another evaluation was performed at the SWAF on 22 September 2010 using the MK 14 MOD 2 prototypes. A 1.5 MOA precision capability was demonstrated using MK 316 MOD 0 ammunition. The lot of M118LR we had available had velocity issues and associated marginal accuracy. The user reps at this demo included (b)(6)

Two of the three prototype MK 14 MOD 2 systems were shipped to MESG-2 for further evaluations and use in establishing adjusted training doctrine. I went out to an EDM course that those rifles were available at along with two borrowed AN/PVS-27 night vision devices on 6 November 2010.

The decision was made to move forward with the MK 14 MOD 2 configuration and funding was provide and procurement actions taken. The first EDM Course planned for use of the MK 14 MOD 2 was in Mid January 2012 and a quantity of rifles sufficient for the course was shipped to MESG-2 (along with AN/PVS-27 NVD's) in time for it. Feedback was positive from (b)(6) who had taken over running the EDM Course. The only issue I recall was that he noticed a couple scopes slipping in the rings at 15 in-lbs of torque so I told him he could go to 20 or 25 in-lbs to resolve the issue (which worked well).

(b)(6) then attained the MK 14 MOD 2 Systems needed for the next course (late March start) through (b)(6) There were then what appear to be a couple scope issues – primarily zero stop related, along with two rifles which spit out the extractor. One of these only did this once and had another installed and was fine. The other did it twice and is being returned to Crane for evaluation (along with the two rifles which have the scope zero stop issue). I did speak to the Night Force Military Rep (b)(6) and he said 15 to 25 inch-lbs is fine for the rings and excessive torque would not impact the scope (only damage the ring screws). He did say that excessive torque on the zero stop lock screws could bend the clutch plates and cause inconsistency which may be the issue.

I anticipate that extractor interference with the barrel and/or tight headspace will be determined to encourage the extractor to come loose (also it is important that the spring/detent combo be strong/long enough to apply proper retention pressure. M14 SSR headspace can be as tight as 1.630 inches(and subsequently MK 14 MOD 2 as well) where other MK 14's were only allowed to get to 1.632 minimum.

(b)(6)
MK 14 ISEA
(b)(6)

Note: A debrief on the 11 Aug Demo is available as are results of the 22 Sept Prototype Evaluation.